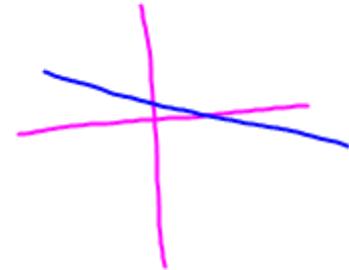


Before you go, write these down as the first two problems of your homework and answer them to the best of your ability:

1. What is different between the solutions for a linear equation versus the solutions of a linear inequality?
2. Compare and contrast the solutions for a linear inequality against a system with two or more linear inequalities.

①

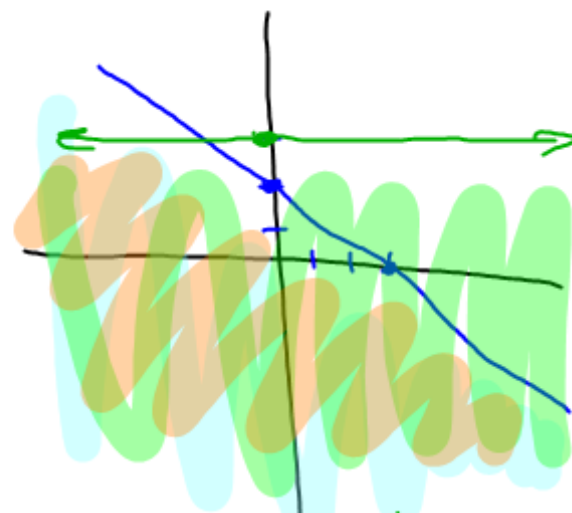
②



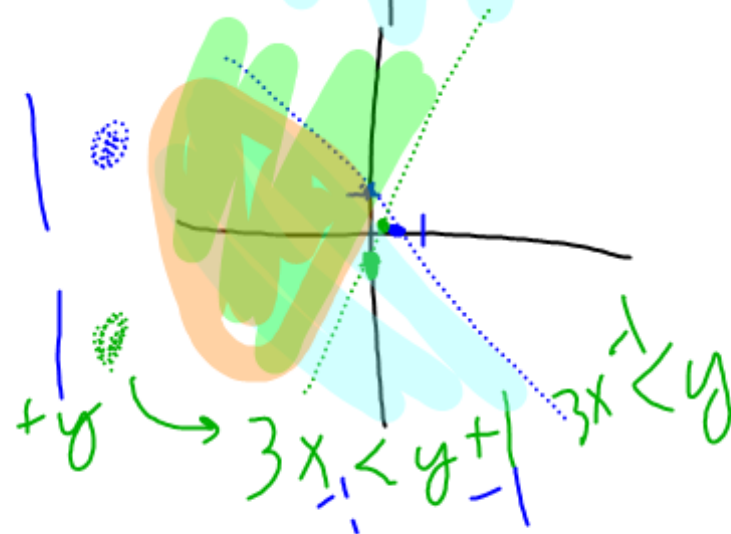
## Warm-Up

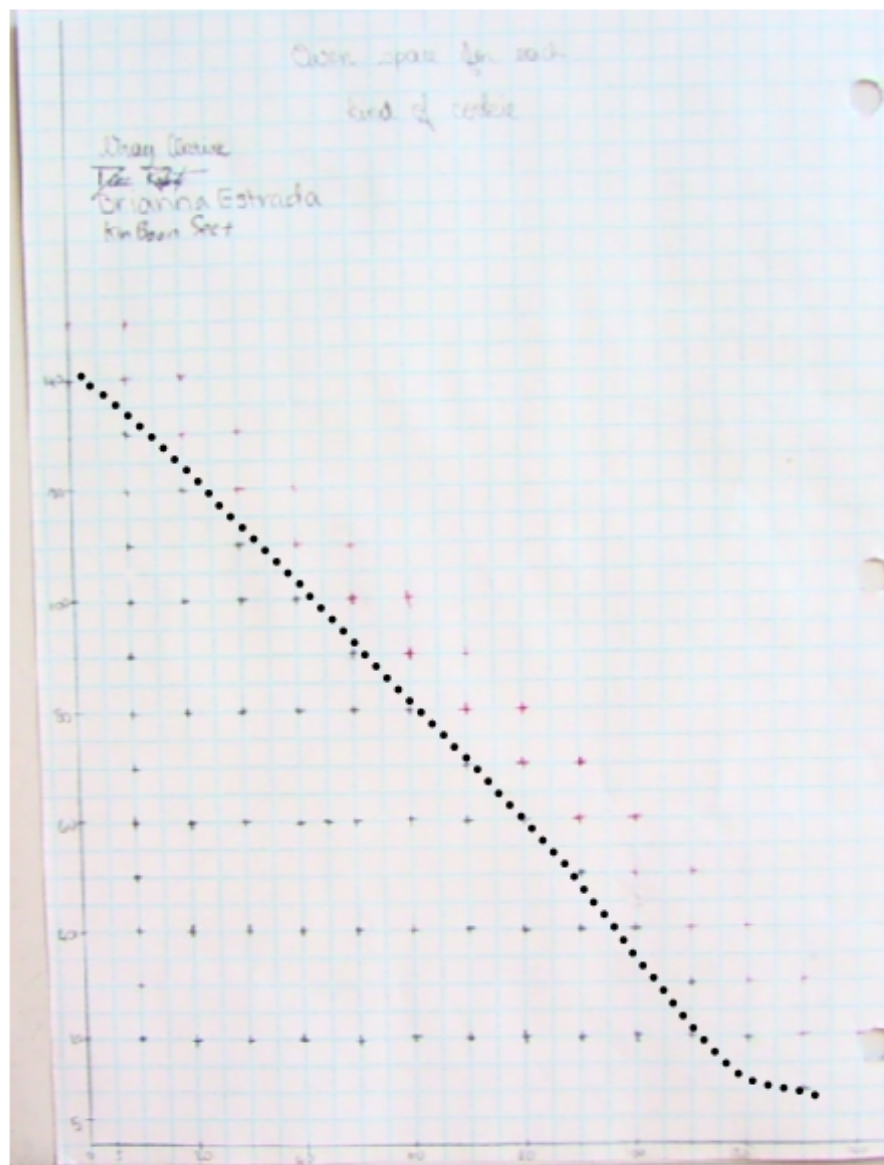
Graph & find the solution to the following system:

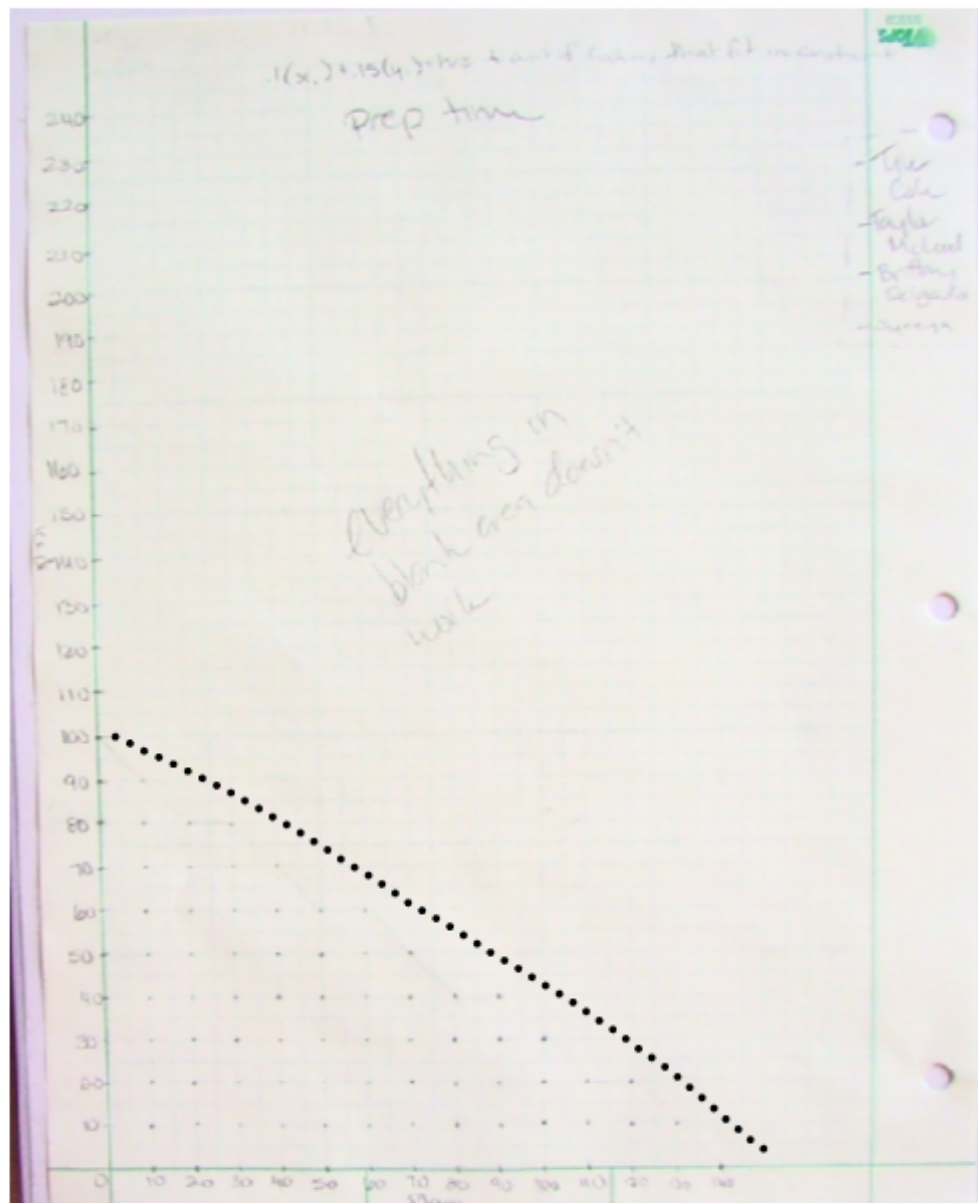
$$\textcircled{1} \begin{cases} 2x + 3y \leq 6 \\ y \leq 3 \end{cases}$$

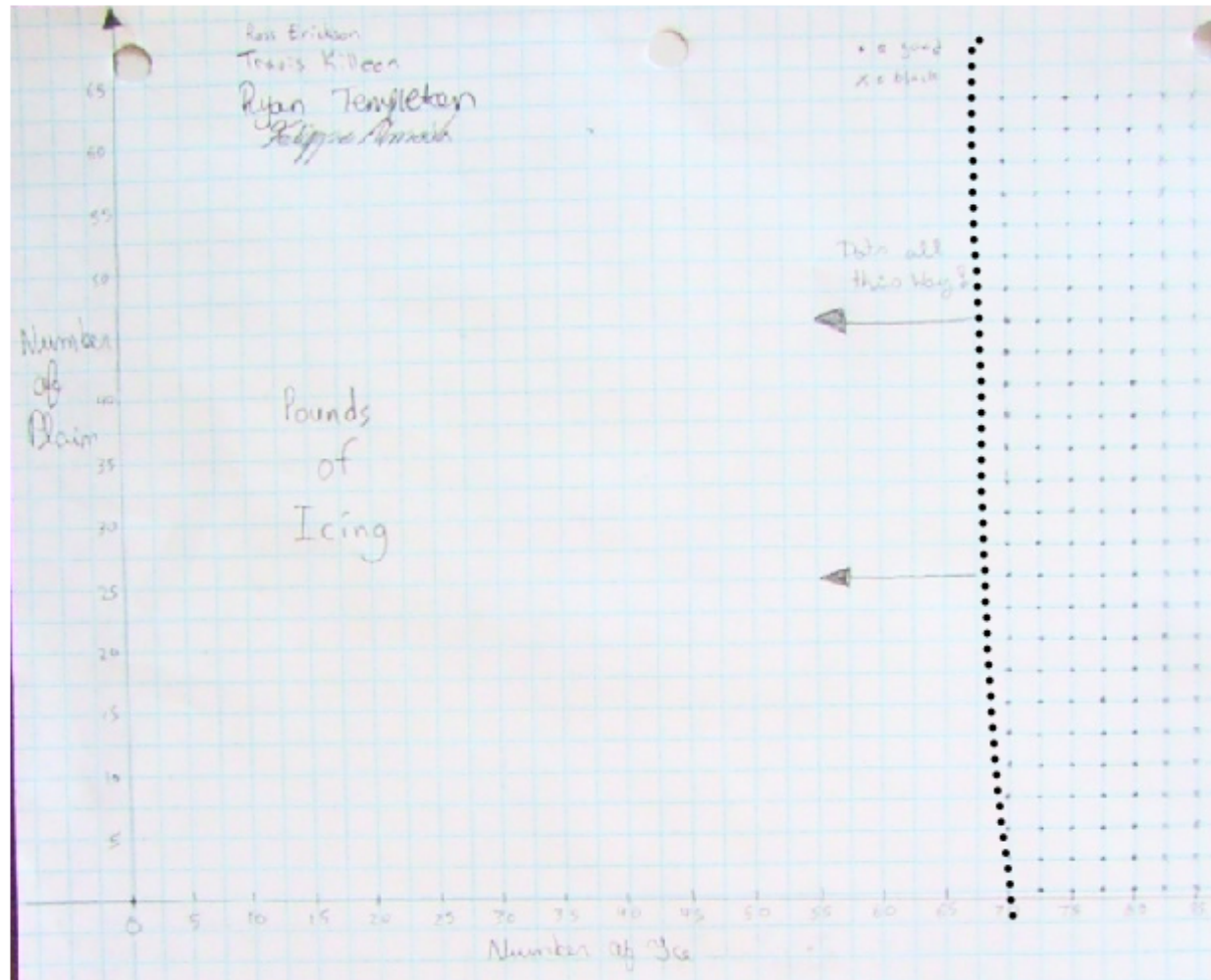


$$\textcircled{2} \begin{cases} 2x + y < 1 \\ 3x - y < 1 \end{cases}$$

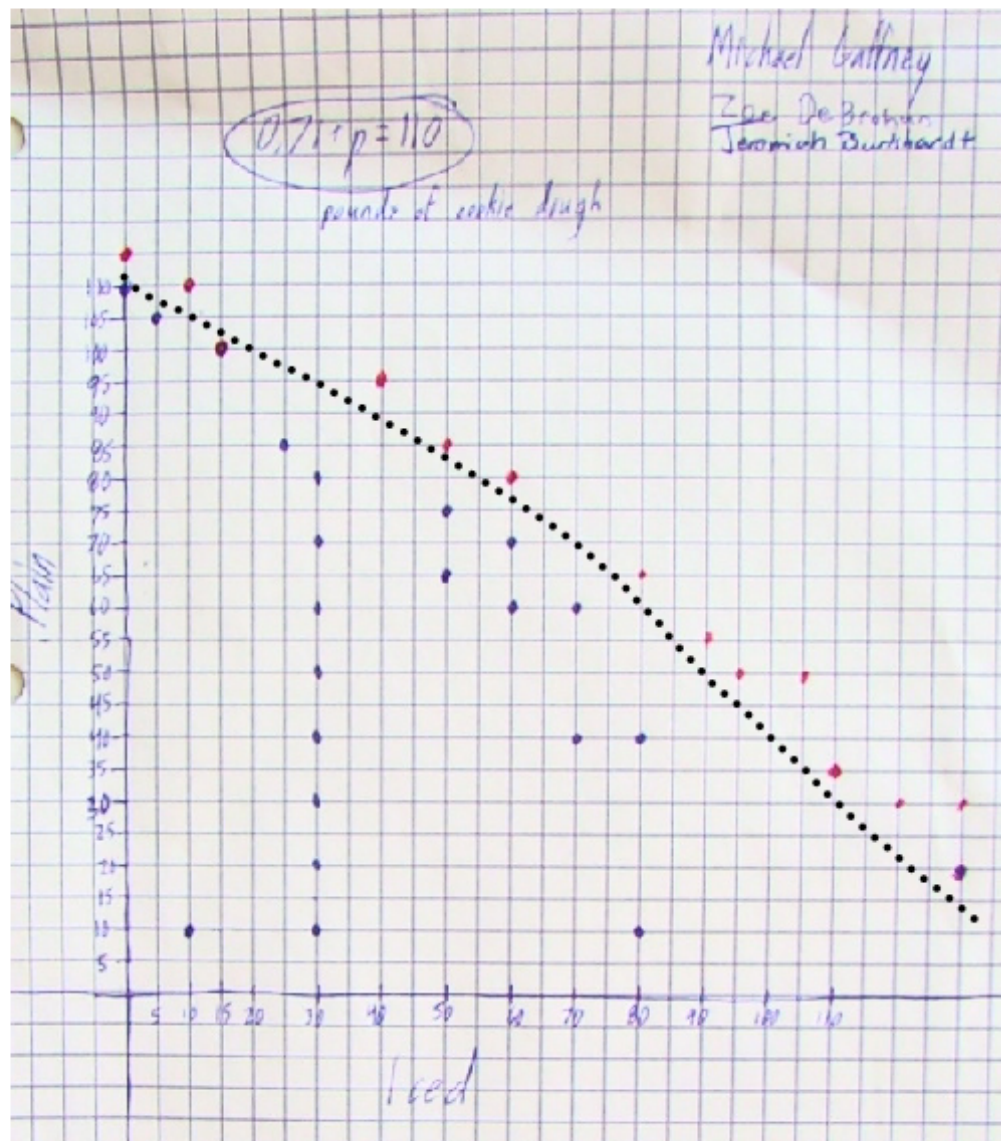










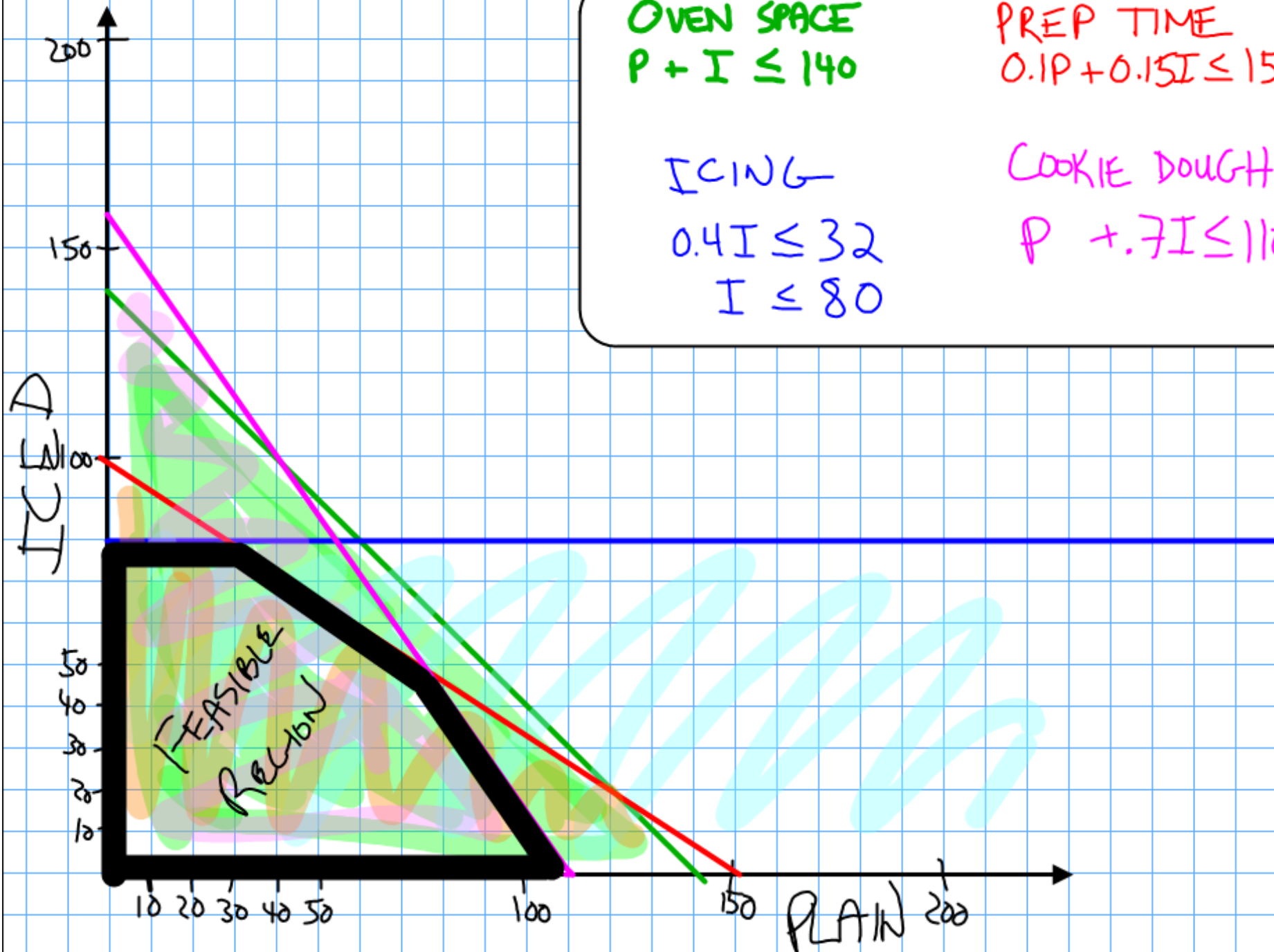


OVEN SPACE  
 $P + I \leq 140$

PREP TIME  
 $0.1P + 0.15I \leq 15$

ICING  
 $0.4I \leq 32$   
 $I \leq 80$

COOKIE DOUGH  
 $P + .7I \leq 110$



• Find the feasible region by graphing Homework

$$\textcircled{1} \begin{cases} 2x + 3y \leq 6 \\ x - y \geq 1 \\ y \geq 0 \end{cases}$$

$$\textcircled{2} \begin{cases} 4x + 5y > 15 \\ \frac{3}{2}x + \frac{3}{4}y \leq 15 \\ y > 0 \\ x > 0 \end{cases}$$

• Half sheet #1 (see next page)



## Dietary Requirement

Maria is planning a snack of graham crackers and blueberry yogurt. Because she is concerned about nutrition, she wants to make sure that she eats less than 700 calories and not more than 20 g of fat with this snack. She would like at least 17 g of protein and at least 30% of the daily requirement of iron. The information of each snack is below:

	Serving	Calories	Fat	Protein	Iron
Graham Crackers	1 cracker	60	2g	2g	6%
Blueberry Yogurt	4.5 oz	130	2g	2g	1%

1. Create an inequality for each constraint.
2. Create a feasible region.
3. If Maria was in a hurry and wanted to eat the least amount of food, how much should she eat of each serving and still meet the requirements?
4. If Maria had a lot of time and wanted to eat the most amount of food, how much should she eat of each serving and still meet the requirements?